

MELT PRESSURE TRANSDUCER

with mV/V output

SAND melt pressure transducers are ideal for the measurement of melt pressure in plastic extrusion processing and filament spinning at temperature of up to 550°C, sensors are available with mercury filling, RoHS-approved fluid, oil and Sodium-Potassium(NaK) filling for various applications.



Conventional type

- Mercury filled
- Accuracy better than 0.5%FS
- Max operating temperature 400°C



Environmental type

- Mercury-free
- Accuracy better than 1.5%FS
- Max operating temperature 350°C



Heat-resistant type

- Mercury-free
- Accuracy better than 0.5%FS
- Max operating temperature 550°C



Robust type

- Mercury-free
- Accuracy better than 0.5%FS
- Max operating temperature 550°C
- Robust and thicker diaphragm
- Upgraded construction



Technical specifications

Pressure range	0~50bar to 2000bar 0~750psi to 30000psi 0~5MPa to 200MPa
Accuracy	0.25%FS, 0.5%FS, 1.0%FS
Repeatability	0.2%FS, 0.4%FS, 0.8%FS
Input excitation	10VDC (6~12VDC)
Output signal	mV/V
Electrical connection	5PIN, 6PIN, 8PIN
Internal Shunt Calibration	80% FSO
Process connection	1/2"-20UNF, M18X1.5
Diaphragm material	Inconel 718
Max. diaphragm temperature	550 °C (1000°F)
Zero shift due to temperature changes	≤1.5bar/100°C ≤10psi/100°F
Max. ambient temperature	85 °C (185°F)
Overpressure	1.5xFS (<1000bar) 1.2xFS (≥1000bar)
Max Torque	30Nm (22 lbf ft)
Thermocouple	Type J (Standard unit), E, K

MELT PRESSURE TRANSMITTER

with V/mA output

SAND melt pressure transmitters provide the amplified signal 0~10V or 4~20mA to work with DCS and PLC directly for further processing. Various functions are designed for our transmitters such as auto-zero function for local or remote configuration, integrated relay switch for safe protection and explosion proof type for hazardous locations.



Auto-zero function

As an option for 0~10V and 4~20mA transmitters to eliminate zero variations which is activated by pressing the button located on the transmitter housing or performing remotely.



Safe relay function

An optional function available for excess pressure protection. The integrated safe relay has an application specific pressure threshold setting that will put the production line in a safe mode.



Explosion-proof

Designed for use in hazardous locations with all welded construction. ExialBT6 approval.



Explosion proof with flange type

Designed for use in hazardous locations with flange configuration. ExialBT6 approval.



Technical specifications

Pressure range	0~35bar to 2000bar 0~500psi to 30000psi 0~3.5MPa to 200MPa
Accuracy	0.25%FS, 0.5%FS, 1.0%FS
Repeatability	0.2%FS, 0.4%FS, 0.8%FS
Input excitation	24VDC (10~36VDC)
Output signal	V or mA
Electrical connection	5PIN, 6PIN, 7PIN, 8PIN
Internal Shunt Calibration	80% FSO
Process connection	1/2"-20UNF, M18X1.5
Diaphragm material	Inconel 718
Max. diaphragm temperature	550 °C (1000°F)
Zero shift due to temperature changes	≤1.5bar/100°C ≤10psi/100°F
Max. ambient temperature	85 °C (185°F)
Overpressure	1.5xFS (<1000bar) 1.2xFS (≥1000bar)
Max Torque	30Nm (22 lbf ft)
Thermocouple	Type J (Standard unit), E, K

INDUSTRIAL PRESSURE TRANSDUCERS/TRANSMITTERS



PT2XX series industrial sensors are ideal test and control for various kinds of industrial process applications such as hydraulic and pneumatic blow and injection molding, hazardous locations and general purpose at temperature of up to 120°C. The complete line includes high accuracy integrated piezoresistive silicon chips, hydraulic and flush mount configurations. Sensors are available to customize for special requirements.



High accuracy pressure sensor

- Piezoresistive silicon chip
- Range -1 bar to 0 ~ 2000 bar
- Operating temperature up to 120 °C
- Standard mA or Voltage output
- Accuracy better than 0.25%FS



Hydraulic pressure sensor

- Strain gauge
- Range 0 to 2000 bar
- Operating temperature up to 120 °C
- mV/V, mA or Voltage output
- Accuracy better than 0.5%FS



Pressure transmitter with display

- 4-digit display
- 4PIN connector
- 4~20mA output
- Operating temperature up to 120 °C

OTHER PRODUCTS AND ACCESSORIES



Rupture disk



Pressure transducer convertor
mV/V to mA or Voltage



Mini deadweight tester



Drilling kits



Cleaning kits



mV/V signal simulator

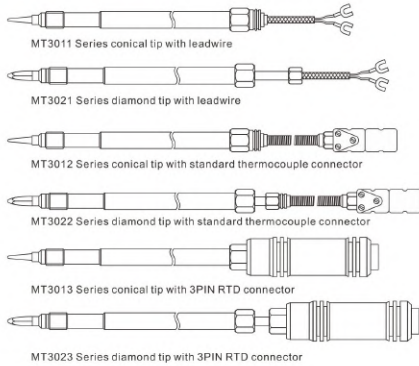
MELT TEMPERATURE SENSOR

SAND manufactures a variety of robust melt temperature sensors which are especially designed to measure temperature in the melt steam for the extrusion and polymer processing industries.

Sensors feature the quick response time, high accuracy and stable measurement with the robust construction and the special design of the measuring element. A selectable advanced ceramic insulation measuring tip provide the high-performance and precise temperature measurement.



DRAWING



Technical specifications	
Range	0~550 °C (1000°F)
Accuracy	0.25%FS, 0.5%FS
Temperature types	Thermocouple J, K, E RTD
Process connection	1/2"-20UNF, M18X1.5
Electrical connection	Direct cable connection 2PIN for thermocouple 3PIN for PT100,
Measuring tip length	0mm~30mm
Measuring tip shape	Conical style Diamond style (Optional ceramic insulation)
Rigid stem length	Standard 150mm Others on request (Max 450mm)
Flexible/lead cable length	Standard 50mm Others on request (Max 3000mm)



Ceramic isolation

Conical tip

Diamond tip



WZPK	-	326S	-	Thread	-	Diameter	-	Length
Count	Null: Single 2: Double			Thread	M16*1.5; G1/2".....			
				Diameter	φ3 / φ4 / φ5 / φ6 / φ8 / φ10			
				Insertion Depth	100 ~ 750 mm			

WZPT	-	214	-	Thread	-	Diameter	-	Depth / Length	-	Types
Count	Null: Single 2: Double			Thread	M10*1.5; M12*1.5; M14*1.5 M16*1.5; G1/2".....					
				Diameter	φ3 / φ4 / φ5 / φ6 / φ8 / φ10					
				Insertion Depth	10 ~ 300 mm					
				Lead Length	1000 ~ 3000 mm					
				Sensor Type	Type J, K, E and PT100					

WZPK	-	376S	-	Thread	-	Diameter	-	Depth / Length	-	Types
Count	Null: Single 2: Double			Thread	M16*1.5; G1/2".....					
				Diameter	φ3 / φ4 / φ5 / φ6 / φ8 / φ10					
				Insertion Depth	100 ~ 750 mm					
				Lead Length	1000 ~ 3000 mm					
				Sensor Type	Type J, K, E and PT100					

WSS	-	-	-	-	-	-	-	-
Dial OD	3 φ60 4 φ100 5 φ150							
Dial Direction	0 Axial direction 1 Radial direction 8 Universal direction							
Installation	0 Non fixed 1 Movable external thread 2 Movable internal thread 3 Fixed external thread 4 Fixed flange 5 Movable bayonet thread							
Thread	M16*1.5, M27*2, G1/2", G3/4,							
Diameter	φ6, φ8, φ10, φ12,							
Insertion depth	130 ~ 1000mm.							

DIGITAL PRESSURE AND TEMPERATURE INSTRUMENT

SAND manufactures a variety of instruments including pressure and temperature indicators, pressure controllers and temperature controllers for the display and control of pressure and temperature in industrial applications. Instruments feature the large 4-digit display, the process value retransmission and easy to configure which make them extremely user-friendly. Various dimensions are available to select for different requirements.

The selectable inputs of strain-gauge, voltage and current which support to compatible with various sensors. An optional secondary input makes it possible to display the pressure and temperature simultaneously. The instruments can be equipped with up to three relay alarms. Two voltage or current analogue outputs are available for retransmission of the measured input signal for further processing. A configurable pressure unit, such as MPa, bar, psi, kg/cm², is available for your selection as an option.



PS4810/PS4810T SERIES PRESSURE INDICATOR

- 85~265VAC or 24VDC
- Up to 3 configurable relay alarms
- Size 96x48mm
- Configurable retransmission of variable values
- Optional RS485 communication interface
- Optional secondary input for temperature display (Type J, K, E, Pt100)



PS4812 SERIES PRESSURE INDICATOR

- 85~265VAC or 24VDC
- Up to 3 configurable relay alarms
- Possibility to configure the units (Bar, psi, MPa and kg/cm²)
- Various sizes 96x96mm, 96x48mm, 48x96mm
- Configurable retransmission of variable values
- Optional RS485 communication interface
- Optional secondary input for temperature display (Type J, K, E, PT100)

PS9016 SERIES PRESSURE CONTROLLER

- 85~265VAC or 24VDC
- 2 configurable relay alarms
- Providing linear output
- PID output: 4~20mA, 0~20mA, 0~10V, 0~5V, 1~5V
- Size 96x96mm
- Optional RS485 communication interface
- Manual / Automatic mode
- Triple anti-interference technology



PS1016/PS1016T SERIES PRESSURE INDICATOR

- 85~265VAC or 24VDC
- Up to 3 configurable relay alarms
- Various sizes 96x96mm, 48x96mm, 48x48mm
- Configurable retransmission of variable values
- Optional RS485 communication interface
- Optional secondary input for temperature display (Type J, K, E, Pt100)



XMTA SERIES TEMPERATURE CONTROLLER

- Universal input (Thermocouple or RTD)
- Heat or Heat & cool control
- Various alarm types
- Up to three outputs for PID control and alarm
- Various sizes 96x96mm, 48x96mm, 48x48mm
- Optional RS485 communication interface

MECHANICAL MELT PRESSURE GAUGE

PT135 Series mechanical melt pressure gauges are designed for applications where the measurements are in high temperature surroundings for local readings. It features no power required. These models also offer mV/V, V and mA output signals for further processing. The design on the rigid snout version of the gauge can be rotated for unobstructed viewing. Integrated thermocouple or RTD configurations are available to provide melt temperature.


Rigid stem type

PT135G--Mechanical gauge
PT135C--Integrated sensors with mV/V outputs
PT135B--Integrated amplifier with V or mA outputs


Flexible capillary type

PT135G--Mechanical gauge
PT135C--Integrated sensors with mV/V outputs
PT135B--Integrated amplifier with V or mA outputs


Flexible stem with thermocouple type

PT135G--Mechanical gauge
PT135C--Integrated sensors with mV/V outputs
PT135B--Integrated amplifier with V or mA outputs

Technical specifications	
Pressure range	0~250bar/400bar/700bar 0~3500psi/5000psi/10000psi 0~25MPa/40MPa/70MPa
Accuracy	1.0%FS, 2.5%FS(PT135G)
Repeatability	0.8%FS, 2.0%FS(PT135G)
Input excitation	No power required - PT135G 10VDC(6~12VDC) - PT135C 24VDC(10~36VDC) - PT135B
Electrical connection	5PIN, 6PIN, 8PIN
Output signal	mV/V (Available for PT135C) mA or V (Available for PT135B)
Process connection	1/2"-20UNF, M18X1.5
Diaphragm material	Inconel 718
Max. diaphragm temperature	400 °C (750 °F)
Max. ambient temperature	85 °C (185 °F)
Zero shift due to temperature changes	≤3bar/100°C ≤20psi/100°F
Max Torque	30Nm (22 lbf ft)
Thermocouple	Type J(Standard unit), E, K


DIGITAL MELT PRESSURE GAUGE

SAND PT545 gauges provide accurate and stable local pressure measurement and display with superior vibration and better resolution for plastic extrusion processing. The gauge head can be rotated up to 285° for unobstructed viewing. This series also incorporates an adjustable alarm setpoint which can be used to warn operators of critical pressures or to shut down equipment.


Flexible stem type

- Large 5-digit display
- LED bar graphs
- Rotatable display
- Process value retransmission
- Integrated relay alarm


Flexible stem with thermocouple type

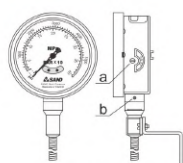
- Large 5-digit display
- LED bar graphs
- Rotatable display
- Process value retransmission
- Integrated relay alarm
- Optional thermocouple type J, K, E and RTD

Technical specifications	
Pressure range	0~50bar to 2000bar 0~750psi to 30000psi 0~5MPa to 200MPa
Accuracy	E-bar display ±2%FS Digital display ±0.5%FS
Display resolution %FS	E-bar display 2 Digital display 0.01 0.02, 0.05 0.1 0.2 0.5 1.0 (Adjustable)
Insulation resistance	≥500MΩ
Input excitation	85~265VAC(Option 24VDC)
Output signal	V or mA
Alarm relay	10A 250VAC, 10A 125VAC 10A 30VDC, 10A 28VDC
Process connection	1/2"-20UNF, M18X1.5
Diaphragm material	Inconel 718
Max. diaphragm temperature	550 °C (1000 °F)
Zero shift due to temperature changes	≤1.5bar/100°C ≤10psi/100°F
Max. ambient temperature	85 °C (185 °F)
Overpressure	1.5xFS (<1000bar) 1.2xFS (≥1000bar)
Max Torque	30Nm (22 lbf ft)
Thermocouple	Type J(Standard unit), E, K

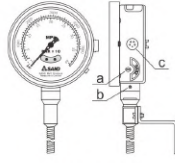
MOUNTING DIRECTION

FACE-DOWN

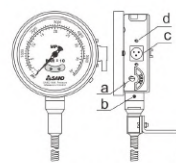
FACE-SIDE

FACE-UP

PT135G

No power required
Zero adjustment for pointer (a)
Unobstructed viewing with rotated head (b)


PT135C

Zero adjustment for pointer (a)
Unobstructed viewing with rotated head (b)
Providing mV/V output (c)


PT135B

Zero adjustment for pointer (a)
Unobstructed viewing with rotated head (b)
Providing V/mA output (c)
Zero adjustment for output (d)

DIGITAL MELT PRESSURE GAUGE

SAND PS600 series have been developed for on-line pressure measurement and display which helps to monitor measured pressure value with four large-size LED digits precisely especially in chemical fiber industry. These indicators have been upgraded with super accuracy, stability and anti-interference compared with the traditional mechanical gauge.


Features

- Local readings
- Large 4-digit display
- One-way relay alarm output,
- Retransmission 4~20mA or 0~10V
- Optional RS485 communication interface
- Superior vibration resistance
- Compatible with various sensors

Technical specifications	
Pressure range	0~50bar to 2000bar 0~750psi to 30000psi 0~5MPa to 200MPa
Input excitation	85~265VAC(Option 24VDC)
Input signal	3.33mV/V, 4~20mA, 0~10V
Output signal	V or mA
Input connector	6PIN or 8PIN
Alarm relay	5A 250VAC
Communication	RS485 Optional

